United States
Environmental Protection
Agency

Office of Public Affairs
Region 5
77 W. Jackson Blvd.
Chicago, IL 60604-3590

Illinois, Indiana
Michigan, Minnesota
Ohio, Wisconsin

EPA Proposes Amendment to the Cleanup Plan for Industrial Excess Landfill

Uniontown, Ohio **April 2002**

Opportunities for Public Involvement

Availability Sessions

To learn more about the proposed amendment to the cleanup plan for the IEL site, attend one of the availability sessions being sponsored by EPA. At the availability sessions, EPA representatives will be present to meet and discuss one-on-one with area residents the change to the cleanup plan EPA is proposing.

Date: April 17, 2002
Times: 2 p.m. - 4 p.m. and
6:30 p.m. - 8:30 p.m.
Place: United Methodist Church
of Uniontown
13370 Cleveland Ave. NW
Uniontown, Ohio

Public Meeting

EPA will explain the recommended change to the cleanup plan for the Industrial Excess Landfill site to the residents of Uniontown at a public meeting. Oral and written comments will also be accepted at the meeting.

Date: April 18, 2002
Time: 7 p.m.
Place: United Methodist Church
of Uniontown
13370 Cleveland Ave. NW
Uniontown, Ohio

Site Location Map

Introduction

This fact sheet summarizes a proposed amendment to the *Record of Decision* for the Industrial Excess Landfill in Uniontown, Ohio. It explains the U.S. Environmental Protection Agency's recommended change to the cleanup plan as previously amended on March 1, 2000. In addition, this fact sheet summarizes other cleanup alternatives analyzed for this site. EPA will select a final remedy for the site after all public comments and information submitted during the comment period have been reviewed and considered.

EPA is issuing the proposed ROD amendment as part of its public participation responsibilities under the Superfund law called the **Comprehensive Environmental Response and Liability Act.**[1] (Words in **bold** are defined in the glossary on page 7.)

This fact sheet summarizes information that can be found in greater detail in the *Focused Feasibility Study* and other documents contained in the information repository for this site (see section entitled "Information Repository" on page 6). The *Focused Feasibility Study* contains a discussion of the reasons why EPA is reviewing its previous remedy decision, an extensive description of the remedy EPA is now proposing to adopt, and a point by point comparison of the proposed remedy with the previous one.

1*Section 300.435(c)(2)(ii) of the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR 300.435(c)(2)(ii)) and Section 113 (k)(2) and 117 of the Comprehensive Environmental Response, Compensation, and Liability Act (42 U.S.C. 9613(k)(2) and 9617) require publication of a notice describing the proposed Record of Decision Amendment. Information supporting the decision, such as the Focused Feasibility Study, must also be made available to the public for comment. This fact sheet is a summary of information contained in the Focused Feasibility Study for the Industrial Excess Landfill site. Please consult that document for more detailed information.*

Site Background

The IEL site is a closed landfill located on Cleveland Avenue in Uniontown, Ohio, about 10 miles southeast of Akron. From 1966 to 1980, the landfill accepted both industrial wastes and commercial and household trash. The site was placed on EPA's National Priorities List in June 1986. The NPL is a list of the nation's top priority hazardous waste sites eligible for investigation and cleanup under the Superfund program.

An investigation conducted by EPA determined that hazardous materials had been landfilled at the site–resulting in the release of **volatile organic compounds** and **metals** into the ground water. In addition, EPA determined that the landfill was generating **methane** gas which threatened to reach explosive levels in the basements of buildings adjacent to the landfill.

In 1987, in advance of choosing an overall remedy for the site, EPA determined that about 100 homes in the path of ground-water contamination from the site should be connected to a municipal water supply. By the end of 1991, the provision of municipal water to the threatened area was complete.

In July 1989, EPA issued a record of decision, which set forth the site cleanup plan. The plan included: 1) installation of a multi-layer surface cap, 2) expansion of the existing methane gas venting system, 3) extraction and treatment of contaminated ground water beneath and near the landfill, 4) monitoring of the ground water and gas venting system, and 5) deed restrictions.

Design of the cleanup plan began in 1990, but was slowed by public concern about the possibility of radioactive waste being buried in the landfill. EPA tested ground water for radiation quarterly from May 1992 to March 1993. In September 1994, EPA concluded that there was no significant evidence of radioactive contamination at the site and resumed designing the cleanup plan.

March 2000 Amendment to the 1989 ROD

When the 1989 ROD was signed, EPA believed that a plume of ground-water contamination, including VOCs and metals, would move outward from the landfill, contaminating nearby residential wells. EPA called for a pump-and-treat system to keep the contaminant plume from spreading and to clean the contaminated ground water. However, in the years following the 1989 ROD, no such plume developed. Ground-water sampling data collected in 1998 showed that VOCs were no longer present at harmful levels in drinking water outside the landfill boundaries. In fact, the VOC levels found were substantially below federal drinking-water standards. Although elevated levels of metals were found sporadically in off-site monitoring wells, elevated levels of metals were not found in any residential wells off site. The results of ground-water sampling analysis suggested that natural biological and chemical factors had improved ground-water quality at the IEL site. This process is called **natural attenuation**. In view of the evident improvements in ground-water quality, in January 1999, EPA proposed that the pump-and-treat component of the cleanup plan be eliminated.

The 1989 ROD also called for the construction of a landfill cap (cover) comprised of both clay and synthetic liners. In January 1999, EPA proposed modifying the cap design by eliminating the clay liner. EPA anticipated that the modified cap design would provide the same degree of protectiveness as the original cap design, but would cost significantly less money. In March 2000, EPA signed the ROD amendment, which approved the modification of the cap design and the elimination of the pump and treat system.

New Proposal to Change the Landfill Remedy

In July 2000, a group of PRPs, parties considered potentially responsible for the contamination at IEL, asked EPA whether it would be willing to consider a different concept for cleaning up the site: a biodiverse phyto-cap/enhanced natural attenuation remedy. In response, EPA said that it would be willing to at least consider such a proposal. The PRPs submitted a detailed proposal in November 2000. EPA reviewed it and found it merited further analysis. EPA therefore initiated a focused feasibility study to compare the proposal to the March 2000 remedy.

While the principal objective of the March 2000 remedy is to *contain* contamination within the landfill, the principal objective of the alternative the PRPs proposed is to *transform* contamination within the landfill. This approach is based on the finding that trees and vegetation create an environment in the root zone which enables microorganisms (yeast, fungi, bacteria) to break down organic contaminants into smaller, less harmful products. The PRP proposal calls for enhancing the existing vegetation at the site by selectively planting trees and other plants in certain areas of the landfill. The result would be 1) to promote natural attenuation as described above, 2) to enhance the ability of existing soil cover to retain water and reduce **leachate**, and 3) to provide an attractive and varied habitat for wildlife. Although experience with full-scale application of this technology at Superfund sites is limited, phytoremediation has been studied extensively in research and demonstration projects. The results of these applications indicate that enhancing the vegetative cover at IEL would promote further natural attenuation of subsurface contamination.

Cleanup Alternatives Evaluated

Alternative 1: No Further Action

Under this alternative, no further action would be taken to clean up the site. However, the existing fence would remain to restrict site access and the methane gas venting system would continue to be operated to control the movement of gasses off of the site.

Cost: $390,000

Alternative 2: Modified Cap; Natural Attenuation of Ground-Water Contamination Off Site; Expanding Existing Methane Gas Venting System; Monitoring Cap, Ground Water, and Methane Gas Venting System; Deed Restrictions; and Perimeter Fencing

Remedy Selected in March 2000 ROD Amendment

This would involve installing a cap over the landfill that meets **Resource Conservation and Recovery Act** standards. The cap would consist of the existing soil cover (recompacted and increased in areas to provide sufficient cover), 12 inches of engineered sub-base and gas collection layer, a geosynthetic liner over the entire landfill; a drainage layer using a geonet/geotextile material, 18 inches of fill, and six inches of top soil; expanding the methane gas venting system; allowing natural processes to break down the contaminants in off-site ground water; maintaining the existing fence around the site; placing deed restrictions on the future use of the site property; and monitoring the effectiveness of the remedy via periodic testing of ground water and landfill gas.

Cost: $13.6 million

Alternative 3: Enhancing the Existing Vegetative Cover; Natural Attenuation of Both Off-Site and On-Site Ground-Water Contamination; Monitoring of Ground Water and Landfill Gas; Perimeter Fencing; Deed Restrictions; Maintenance of Alternate Water Supply; and Additional Design Studies

EPA's Recommended Amendment to the Cleanup Plan

This would involve planting more trees and other vegetation on the site; allowing natural processes to break down the contaminants in ground water, both on site and off site; upgrading the existing ground-water monitoring network by installing new wells and abandoning others as needed; conducting long-term monitoring of the ground water, landfill gas emissions, and enhanced cover to evaluate natural attenuation and ensure continued protection of human health and the environment; upgrading the fence around the perimeter of the site; placing deed restrictions on the landfill property so as to rule out inappropriate development; maintaining the public water system that was installed in 1991; and conducting additional design studies, including one of elevated **benzene** levels at certain areas of the landfill. Studies would also be conducted to evaluate the risks associated with the projected land use for the site: a nature preserve with possible public access and recreational use.

Cost: $7 million

Rationale for Amending the Record of Decision

EPA is proposing to change the remedy for the IEL site for two principal reasons: **(1) Ground-water quality continues to improve.** Recent data confirm that ground-water quality is improving both off site and on the landfill itself. (See Ground-Water Sampling Trends on page 4). EPA now believes it has sufficient evidence showing that natural attenuation is likely to clean up ground water throughout the site within a reasonable period of time and that a remedy focused on preventing all infiltration of water into the landfill is not necessary. **(2) There is strong local interest in a cleanup alternative that would permit more flexible land use.** The Lake Township Trustees urged the Agency to evaluate an alternative that might permit the landfill to be used for recreational purposes with some degree of public access–as a nature preserve with walking paths, for example. Under the landfill cap remedy the agency selected previously, no public access of any kind was ever contemplated. Under the vegetative cover/natural attenuation remedy, however, recreational access would not be ruled out. If studies show the landfill to be safe for visitors, public access via walking paths, picnic areas, etc. could be considered. Ohio EPA has indicated its willingness to consider such an alternative to the traditional landfill-cap approach.

Evaluating the Recommended Amendment to the ROD

EPA has evaluated the three alternatives against the criteria described on page 6. Based on this evaluation, EPA believes that the proposed amendment to the cleanup plan (Alternative 3) satisfies the criteria most completely. EPA believes that the proposed remedy is protective of human health and the environment, complies with federal and state requirements that are legally applicable or relevant and appropriate to the cleanup action, and is cost-effective. Because natural attenuation is not an active engineered technology, it does not satisfy the CERCLA preference for treatment as a principal element of the remedy. Nevertheless, in breaking down ground-water contamination, natural attenuation will achieve the same end results as an engineered treatment process. The proposed change does use permanent solutions and alternative treatment technologies to the maximum extent practicable. Because this remedy may result in hazardous substances remaining on site above health-based levels, a review will be conducted at least every five years after the cleanup action begins to ensure that the remedy continues to provide adequate protection of human health and the environment.

Ground-Water Sampling Trends

The results of the ground-water sampling conducted from August 2000 to September 2001 showed the following trends, indicating that the contaminants at the site are breaking down naturally.

- The number of organic contaminants detected has steadily declined. At one time nearly 80 **organic compounds** were detected at IEL. Currently, only 13 are being detected.
- Of the 13 organic compounds detected, only benzene, **vinyl chloride,** and **1,2 dichloroethane** exceeded drinking-water standards in certain on-site monitoring wells. No VOCs in excess of drinking-water standards were detected off site.
- The concentration of metals in ground water on site and off site appears to have decreased. In 1998, several metals exceeded drinking-water standards within and outside the landfill. However, during the September 2001 survey, significantly fewer metals were detected above drinking-water standards.
- **Thallium** and **arsenic** exceeded drinking-water standards in a few on-site wells in September 2001. Thallium also slightly exceeded drinking-water standards in one off-site well in September 2001. It is important to note however that thallium was also found at a similar concentration in a background well.
- No other metals were detected in off-site wells at levels greater than drinking-water standards.

Public Comment Period

EPA has established a public comment period to give the community an opportunity to comment on the *Focused Feasibility Study* and proposed ROD amendment. The comment period begins on April 18, 2002, and ends on May 17, 2002. Written comments must be postmarked no later than May 17, 2002, and should be sent to Dave Novak, EPA community involvement coordinator. (See the back page of this fact sheet for contact information.)

Based on new information provided by the public, EPA may modify the proposed ROD amendment or select one of the other two cleanup alternatives described here and in the *Focused Feasibility Study*. Therefore, the public is encouraged to review and comment on all of the cleanup alternatives.

At the conclusion of the comment period, EPA will review all of the comments it receives before making a final decision. EPA will respond to the comments in a document called a responsiveness summary. The responsiveness summary will be placed in the IEL information repositories.

Evaluating the Alternatives Against the Nine Evaluation Criteria

EPA evaluated the alternatives against seven of the nine evaluation criteria (see the table on page 6 describing the nine criteria EPA uses to evaluate an alternative). The state and community acceptance criteria will be evaluated after public comments are received by EPA. The degree to which the alternatives meet the evaluation criteria, as determined by EPA, is shown in the table below. EPA believes that the proposed amendment satisfies the evaluation criteria better than the March 2000 remedy or the no further action alternative.

Evaluation Criteria	Alternative 1 No Further Action	Alternative 2 March 2000 ROD Amendment Remedy	Alternative 3 Enhancing Existing Cover, Contingencies, Monitored Natural Attenuation
1. Overall Protection of Human Health and the Environment			
2. Compliance with ARARs	Not Applicable		
3. Long-Term Effectiveness and Permanence			
4. Reduction of Toxicity, Mobility, or Volume Through Treatment			
5. Short-Term Effectiveness			
6. Implementability			
7. Total Cost	$390,000	$13.6 million	$7 million
8. State Acceptance	Will be evaluated after the public comment period.		
9. Community Acceptance	Will be evaluated after the public comment period.		

 Meets Criteria

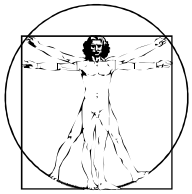
  Partially Meets Criteria

 Does Not Meet Criteria

Explanation of the Nine Criteria

EPA uses the following nine criteria to evaluate the cleanup alternatives. A table comparing the alternatives against these criteria is provided on page 5.

1. Overall Protection of Human Health and the Environment. Assessment of the degree to which the cleanup alternative eliminates, reduces, or controls threats to public health and the environment.

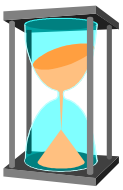


2. Compliance with Applicable or Relevant and Appropriate Requirements. An evaluation of whether or not the alternative attains applicable or relevant and appropriate requirements under federal environmental laws and state environmental or facility siting laws.

3. Long-Term Effectiveness and Permanence. The cleanup alternative is evaluated in terms of its ability to maintain reliable protection of human health and the environment over time.

4. Reduction of Toxicity, Mobility, or Volume Through Treatment. An evaluation of how well a cleanup alternative reduces the harmful nature of the contamination at the site; the ability of the contamination to move from the site into the surrounding area; and the amount of contaminated material.

5. Short-Term Effectiveness. The length of time needed to implement a cleanup alternative is considered. EPA also assesses the risks that carrying out the cleanup alternative may pose to workers and nearby residents.



6. Implementability. An assessment of how difficult the cleanup alternative will be to construct and operate, and whether the technology is readily available.

7. Cost. A comparison of the costs of each alternative. Includes capital, operation, and maintenance costs.

8. State Acceptance. EPA takes into account whether or not the state agrees with the recommended change, and considers comments from the state on the proposed ROD amendment and *Focused Feasibility Study*.

9. Community Acceptance. EPA considers the comments of local residents on the recommended amendment to the cleanup plan presented in this fact sheet and on the information in the *Focused Feasibility Study*.

Information Repository

An information repository is a file for public review containing documents related to the project and the Superfund program. EPA has established two such files for the IEL site. The repositories are located at:

Hartville Branch Library
411 E. Maple St.
Hartville, Ohio

Lake Township Clerk's Office
12360 Market North
Hartville, Ohio

The Next Step

EPA, in consultation with OEPA, will evaluate public comments received during the public comment period before deciding whether or not to amend the cleanup plan for the site. The final cleanup plan will be described in a final decision document that will be available for public review.

After a final plan is chosen, the plan will be designed and implemented.

Glossary

Arsenic - An element of varying appearance which has been used in the production of boric acid, pharmaceutical products and pesticides. It is a by-product of copper, zinc and lead smelting. It is highly toxic by inhalation and ingestion, and is suspected to cause cancer.

Benzene - A VOC produced as a by-product of coal tar distillation, coal processing and coal coking. It is widely used in the chemical and drug industries as a solvent, constituent of motor fuels as an octane booster, and in the manufacture of many chemical compounds and rubber. A known cause of cancer, it is toxic by ingestion, inhalation or absorption.

Comprehensive Environmental Response and Liability Act - A federal law passed in 1980 and modified in 1986 by the Superfund Amendments and Reauthorization Act. The Act created a special tax that goes into a trust fund, commonly known as Superfund, to investigate and clean up hazardous waste sites. Under the program, EPA can:

- pay for site cleanup when parties responsible for the contamination cannot be located or are unwilling or unable to perform the work.
- take legal action to force parties responsible for site contamination to clean up the site or pay back the federal government for the cost of the cleanup.

1,2 Dichloroethane - A volatile, moderately toxic organic chemical used a solvent and fumigant. It can cause skin irritation and liver and kidney damage.

Leachate - The liquid that trickles through or drains from waste, carrying soluble components from the waste. After leachate enters the soil, it can travel downward into ground water or be carried off site with runoff.

Methane - A colorless, nonpoisonous, yet flammable gas created by the decomposition of organic compounds in the absence of air.

Metals - An element usually characterized by lustrous appearance, malleability, and the ability to conduct electricity. A metal tends to donate electrons and, thereby, becomes positively charged. Over three-quarters of all elements are metals. EPA has determined that some metals in excess of certain concentrations in drinking water can be harmful to human health.

Natural Attenuation - Natural attenuation refers to the process by which contaminants break down naturally in the environment.

Organic Compounds - Chemicals containing carbon, with the exception of carbon dioxide and carbonates. Organic chemicals are used throughout farming and industry and can be found in pesticides, plastics, detergents, industrial wastes and oil.

Resource Conservation and Recovery Act - A federal law passed in 1976 and amended in 1984 that regulates the management and disposal of hazardous materials and wastes that are currently being generated, treated, stored, disposed or distributed.

Thallium - A soft, malleable metal used in the manufacture of electronics, pharmaceuticals, glass and alloys. Inhalation of high levels of thallium may cause effects on the nervous system such as numbness in the fingers and toes. Ingestion of high levels of thallium over a short period of time may also cause vomiting, diarrhea, temporary hair loss, and effects on the nervous system, lungs, heart, liver, and kidneys.

Vinyl Chloride - A gaseous substance which is used in the manufacture of plastics to make pipes, raincoats, floor tiles, food packaging, and as a propellant in aerosol containers. Health risks from exposure to high levels of vinyl chloride include liver and lung cancer, as well as cancer of the lymphatic and nervous system.

Volatile Organic Compounds or VOCs - A group of organic compounds that have a tendency to evaporate when exposed to air. Due to this tendency, VOCs disappear more rapidly from surface water than ground water. Since ground water does not usually come in contact with air, VOCs are not easily released and can be present for many years in ground water used for drinking water. When present in drinking water, VOCs may pose a potential threat to human health.

For More Information

For more information about the public comment period, public meeting, proposed ROD amendment, or any other aspects of the IEL project, please contact:

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Chicago, IL 60604-3590

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EPA Web Site

This fact sheet, previous fact sheets and other site documents can be found on the following EPA Web site:

www.epa.gov/region5/sites

Scroll through the list to find Industrial Excess Landfill.

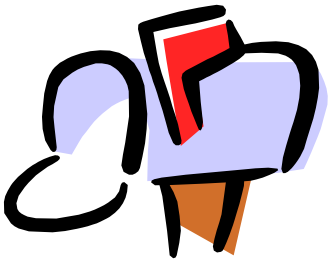
U.S. Environmental Protection Agency
Region 5
Office of Public Affairs (P-19J)
77 West Jackson Boulevard
Chicago, IL 60604-3590

Official Business
Penalty for Private Use - $300

Use This Space to Write Your Comments

Your input on the recommended amendment to the cleanup plan for the IEL site is important to EPA. Comments provided by the public are valuable in helping EPA select a final cleanup plan for the site.

You may use the space below to write your comments. You may hand this in at the April 18, 2002 public meeting or fold and mail to Dave Novak. Comments must be postmarked no later than May 17, 2002. If you have any questions, please contact Dave Novak at (312) 886-7478, or toll-free at 1-800-621-8431, Ext. 67478. Comments may also be faxed to Dave at (312) 353-1155 or sent via e-mail to: novak.dave@epa.gov



Name_____

Affiliation_____

Address_____

City_____State_____

Zip_____

Industrial Excess Landfill Site Comment Sheet

Fold, stamp, and mail

Name_____
Address_____
City_____State_____
Zip_____

Place
Stamp
Here

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